CAS ONLINE PRINTOUT

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=> d his

     (FILE 'HOME' ENTERED AT 08:27:02 ON 31 MAY 2007)

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L1                STRUCTURE UPLOADED
L2              0 S L1
L3              0 S L1 FUL
L4                STRUCTURE UPLOADED
L5              0 S L4

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     FILE 'CAPLUS' ENTERED AT 08:31:04 ON 31 MAY 2007
                E US 20050288468/PN
L6              1 S E3
                SELECT RN L6 1

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L7             41 S E1-E41

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L9              0 S L8
L10               STRUCTURE UPLOADED
L11               STRUCTURE UPLOADED
L12            50 S L11
L13             0 S L10 FUL
L14          1965 S L11 FUL
L15               STRUCTURE UPLOADED
L16               STRUCTURE UPLOADED
L17             1 S L16
L18            14 SEARCH L16 SSS  SUB=L14 FULL
L19               STRUCTURE UPLOADED
L20             0 SEARCH L19 SSS  SUB=L14 FULL
L21               STRUCTURE UPLOADED
L22             0 SEARCH L21 SSS  SUB=L14 FULL
L23               STRUCTURE UPLOADED
L24            19 SEARCH L23 SSS  SUB=L14 FULL

     FILE 'CAPLUS' ENTERED AT 08:49:56 ON 31 MAY 2007

=> d l10
L10 HAS NO ANSWERS
L10               STR
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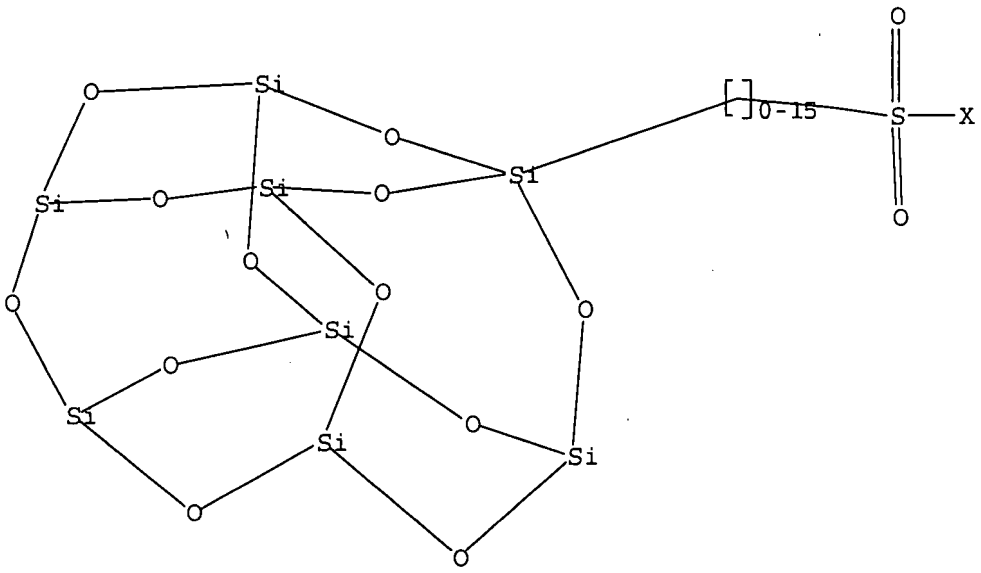
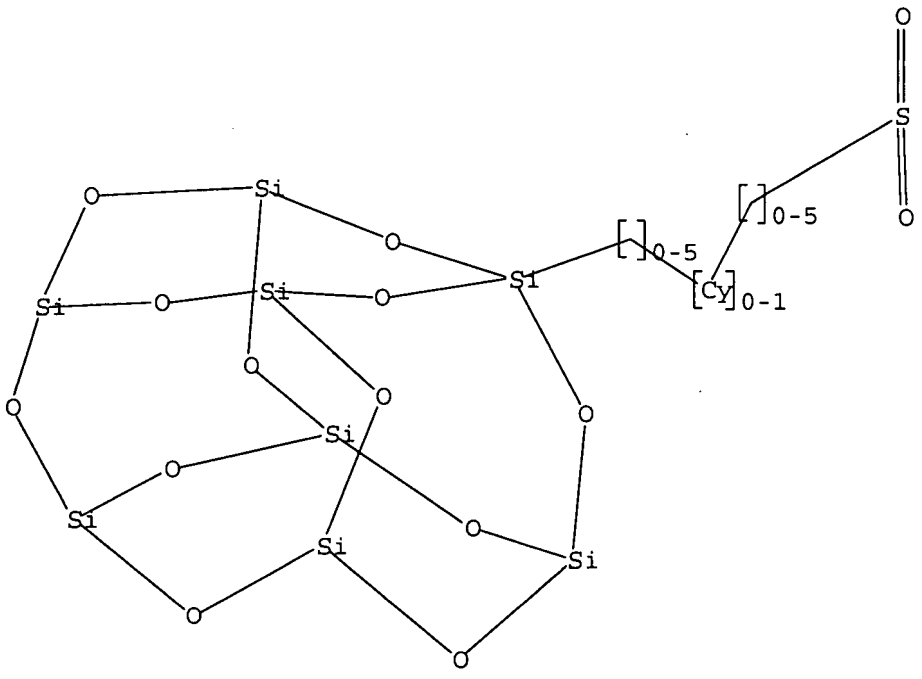
CAS ONLINE PRINTOUT



Structure attributes must be viewed using STN Express query preparation.

=> d l23
L23 HAS NO ANSWERS
L23 STR



Structure attributes must be viewed using STN Express query preparation.

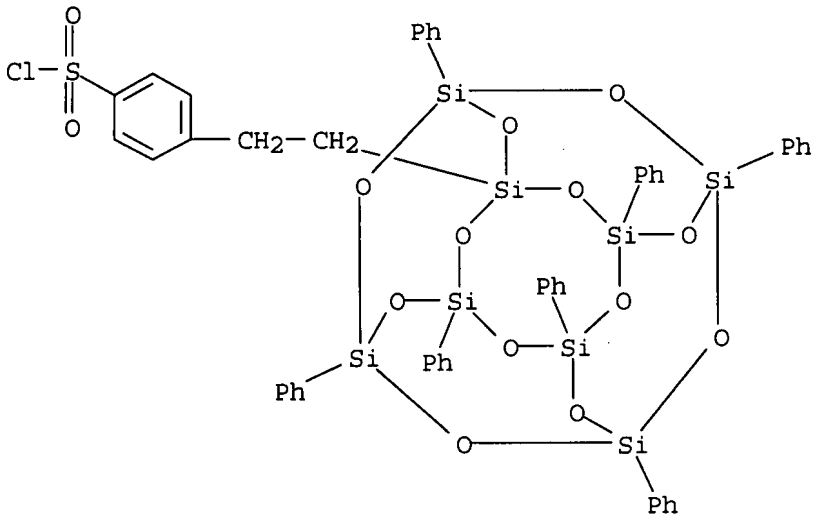
=> s l24
L25 5 L24

CAS ONLINE PRINTOUT

=> d bib abs hitstr l25 1-5

L25 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:874865 CAPLUS
DN 142:56733
TI Living Radical Polymerization by Polyhedral Oligomeric Silsesquioxane-Holding Initiators: Precision Synthesis of Tadpole-Shaped Organic/Inorganic Hybrid Polymers
AU Ohno, Kohji; Sugiyama, Satoshi; Koh, Kyoungmoo; Tsujii, Yoshinobu; Fukuda, Takeshi; Yamahiro, Mikio; Oikawa, Hisao; Yamamoto, Yasuhiro; Ootake, Nobumasa; Watanabe, Kenichi
CS Institute for Chemical Research, Kyoto University, Uji, Kyoto, 611-0011, Japan
SO Macromolecules (2004), 37(23), 8517-8522
CODEN: MAMOBX; ISSN: 0024-9297
PB American Chemical Society
DT Journal
LA English
AB Incompletely condensed polyhedral oligomeric silsesquioxane (POSS) with the highly reactive group of trisodium silanolate was used for the synthesis of two initiators for atom transfer radical polymerization, one with a 2-bromoisobutyl group and the other with a chlorosulfonyl group. These initiators were applied to solution polymns. of styrene and Me methacrylate in the presence of a copper complex. In both systems, polymerization proceeded in a living fashion, as indicated by the first-order kinetics of monomer consumption, the evolution of mol. weight in direct proportion to monomer conversion, the good agreement of mol. weight with the theor. one, and the low polydispersity, thus providing tadpole-shaped polymers with an "inorg. head" of POSS and an "organic tail" of well-defined polymer. Thermogravimetric and differential scanning calorimetric studies showed that both thermal degradation and glass transition temps. of the organic/inorg. hybrid polymers with mol. wts. up to about 20 000 were enhanced as compared to those of model polymers without the POSS moiety.
IT 660392-78-9P
RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(in preparation of living radical polymerization polyhedral oligomeric silsesquioxane-holding initiators)
RN 660392-78-9 CAPLUS
CN Benzenesulfonyl chloride, 4-[2-(heptaphenylpentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl)ethyl]- (9CI) (CA INDEX NAME)

CAS ONLINE PRINTOUT



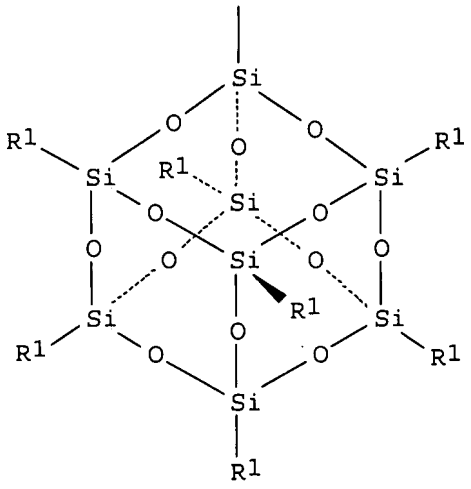
RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:779219 CAPLUS
DN 141:285810
TI Positive-working resist composition containing acrylic resin with polyhedral oligomeric silsesquioxane group
IN Adegawa, Yutaka
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 55 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004264479	A	20040924	JP 2003-53704	20030228
PRAI	JP 2003-53704		20030228		

GI

CAS ONLINE PRINTOUT



I

AB The composition contains (A) an acrylic resin decomposable by acid for increasing solubility to alkaline developer and comprising (a1) a repeating unit bearing I [R1 = (un)substituted, (branched) or (cyclic) alkyl] and (a2) (meth)acrylic acid ester repeating unit containing >0 mol% of acrylic acid ester unit, and (B) a compound generating an acid by actinic ray irradiation The composition, sensitive to far UV, shows high resolution, mask linearity, and less scum generation.

IT 760971-81-1P 760971-83-3P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos.-working resist composition containing acrylic resin with polyhedral oligomeric silsesquioxane group)

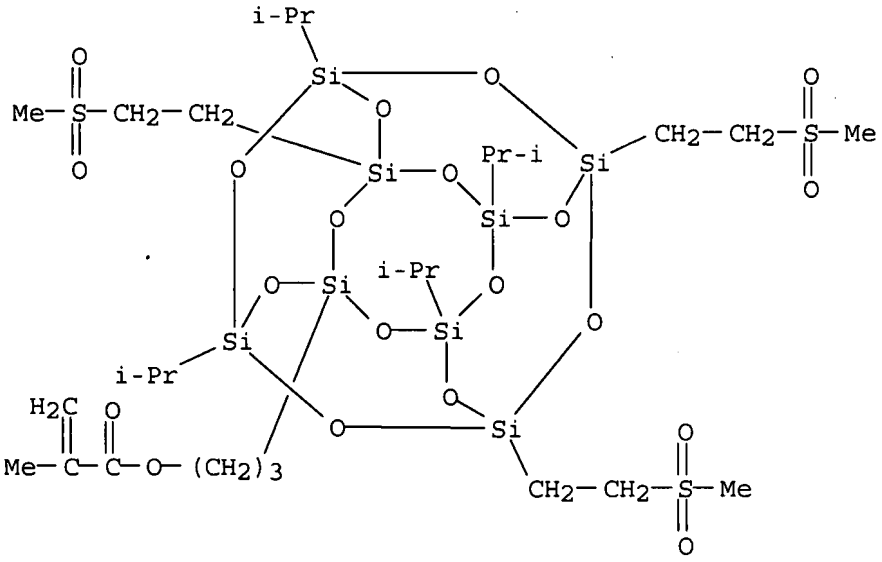
RN 760971-81-1 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-[3,5,11,13-tetrakis(1-methylethyl)-7,9,15-tris[2-(3-methylsulfonyl)ethyl]pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl ester, polymer with 1,1-dimethylethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

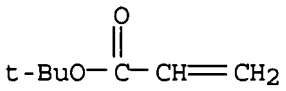
CRN 760970-40-9
CMF C28 H60 O20 S3 Si8

CAS ONLINE PRINTOUT



CM 2

CRN 1663-39-4
CMF C7 H12 O2

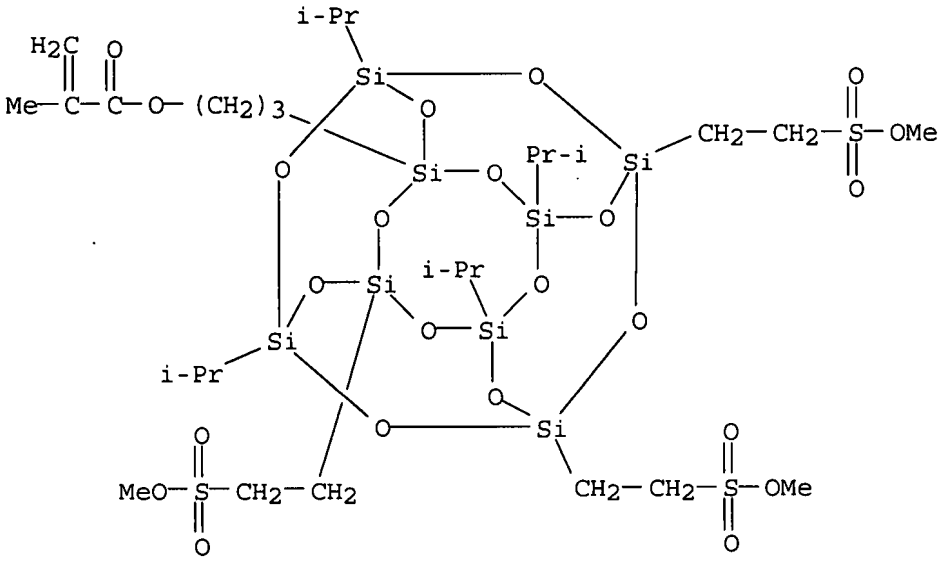


RN 760971-83-3 CAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-[3,7,13-tris[2-(methoxysulfonyl)ethyl]-5,9,11,15-tetrakis(1-methylethyl)pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl ester, polymer with 1,1-dimethylethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

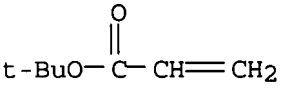
CRN 760970-42-1
CMF C28 H60 O23 S3 Si8

CAS ONLINE PRINTOUT



CM 2

CRN 1663-39-4
CMF C7 H12 O2

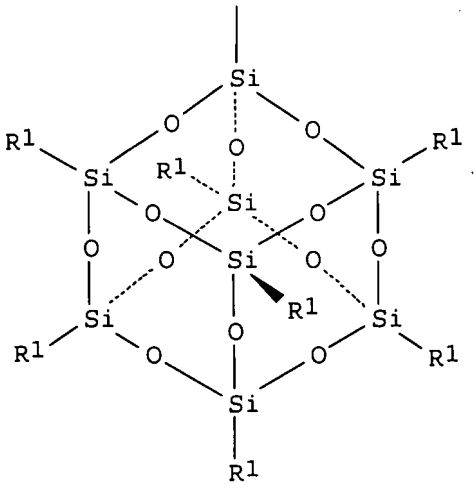


L25 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:779218 CAPLUS
DN 141:285809
TI Positive-working resist composition containing acrylic resin with lactone and polyhedral oligomeric silsesquioxane groups
IN Adegawa, Yutaka
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 62 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004264478	A	20040924	JP 2003-53703	20030228
PRAI	JP 2003-53703		20030228		

GI

CAS ONLINE PRINTOUT



I

AB The composition contains (A) a resin decomposable by acid for increasing solubility
to alkaline developer and comprising a repeating unit bearing I [R1 = (un)substituted, (branched) or (cyclic) alkyl] and another unit bearing lactone structure, and (B) a compound generating an acid by actinic ray irradiation The composition, sensitive to far UV, shows high resolution, mask linearity, and less scum generation.

IT 760970-41-0P 760970-43-2P 760970-48-7P
760970-49-8P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. resist composition containing alkali-soluble acrylic resin with lactone and
POSS groups)

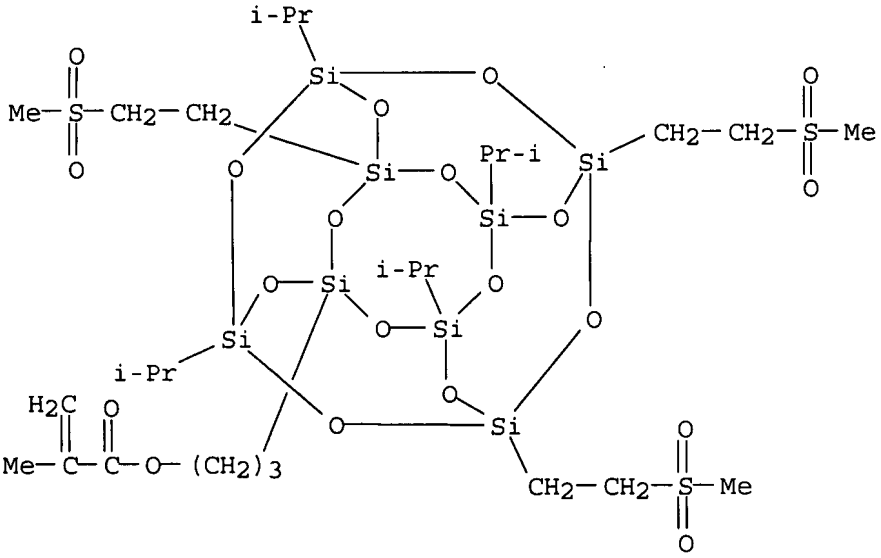
RN 760970-41-0 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate and 3-[3,5,11,13-tetrakis(1-methylethyl)-7,9,15-tris[2-(methylsulfonyl)ethyl]pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

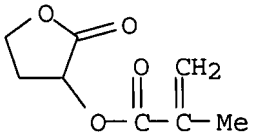
CRN 760970-40-9
CMF C28 H60 O20 S3 Si8

CAS ONLINE PRINTOUT



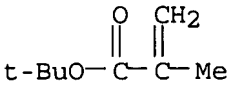
CM 2

CRN 195000-66-9
CMF C8 H10 O4



CM 3

CRN 585-07-9
CMF C8 H14 O2

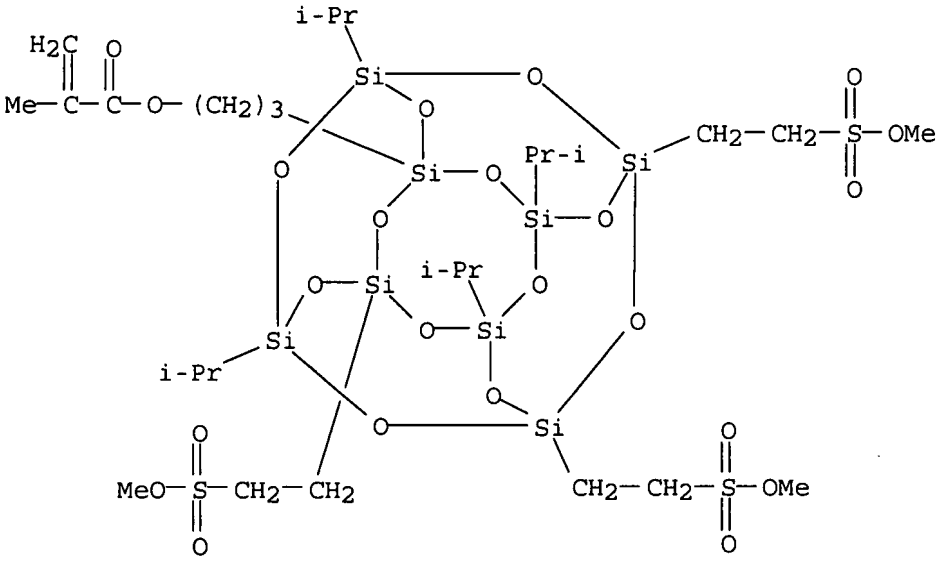


RN 760970-43-2 CAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,1-dimethylethyl ester, polymer with tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate and 3-[3,7,13-tris[2-(methoxysulfonyl)ethyl]-5,9,11,15-tetrakis(1-methylethyl)pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

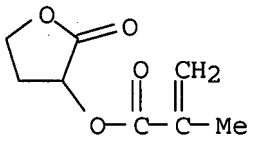
CRN 760970-42-1
CMF C28 H60 O23 S3 Si8

CAS ONLINE PRINTOUT



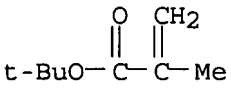
CM 2

CRN 195000-66-9
CMF C8 H10 O4



CM 3

CRN 585-07-9
CMF C8 H14 O2

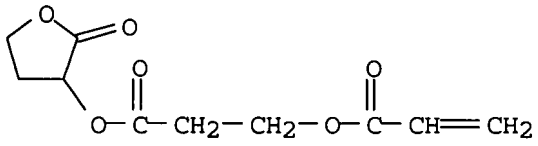


RN 760970-48-7 CAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-[3,5,11,13-tetrakis(1-methylethyl)-7,9,15-tris[2-(methylsulfonyl)ethyl]pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl ester, polymer with 1,1-dimethylethyl 2-propenoate, 3-oxo-3-[(tetrahydro-2-oxo-3-furanyl)oxy]propyl 2-propenoate and 3-[3,7,13-tris[3-(methylsulfonyl)propyl]-5,9,11,15-tetrakis(1-methylethyl)pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

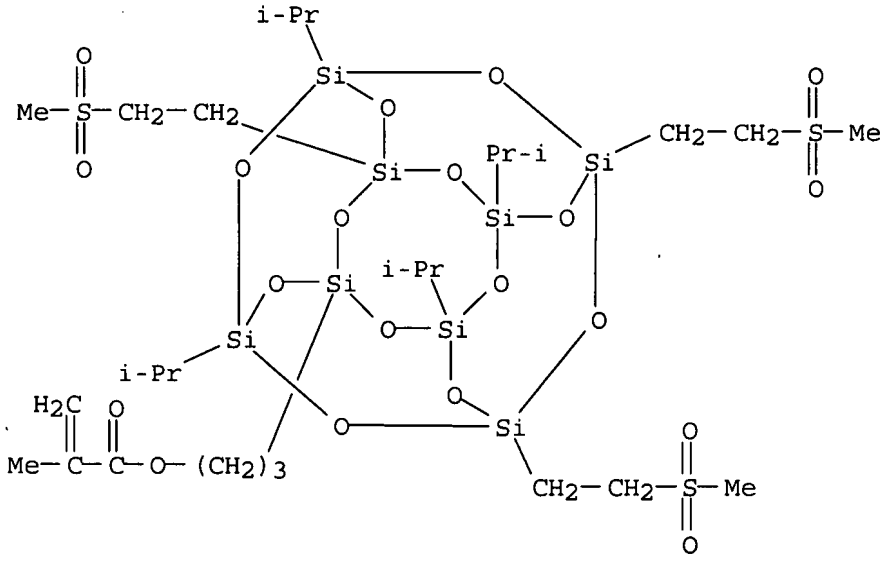
CRN 760970-45-4
CMF C10 H12 O6

CAS ONLINE PRINTOUT



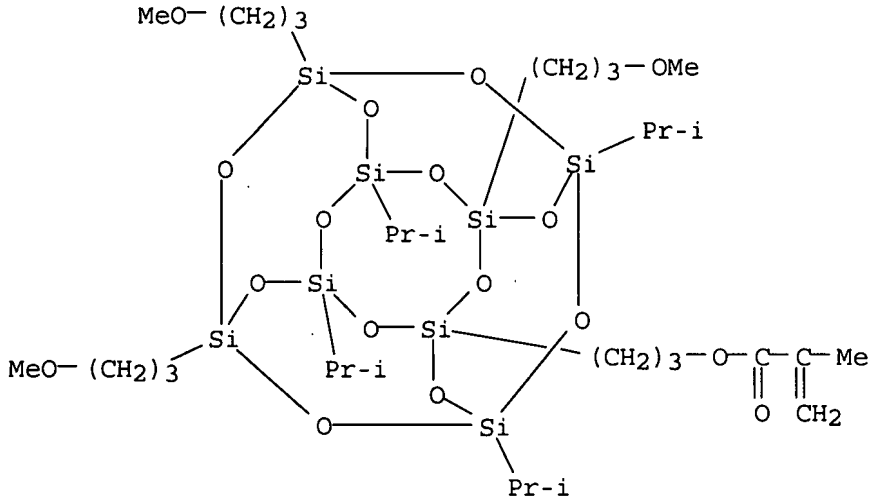
CM 2

CRN 760970-40-9
CMF C28 H60 O20 S3 Si8



CM 3

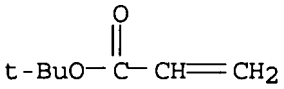
CRN 760970-38-5
CMF C31 H66 O17 Si8



CAS ONLINE PRINTOUT

CM 4

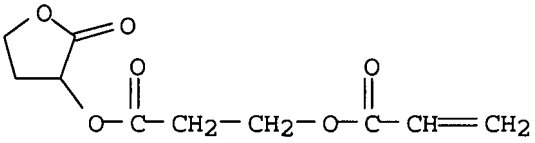
CRN 1663-39-4
CMF C7 H12 O2



RN 760970-49-8 CAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-[heptakis(1-methylethyl)pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl ester, polymer with 1,1-dimethylethyl 2-propenoate, 3-oxo-3-[(tetrahydro-2-oxo-3-furanyl)oxy]propyl 2-propenoate and 3-[3,7,9-tris[2-(methoxysulfonyl)ethyl]-5,11,13,15-tetrakis(1-methylethyl)pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

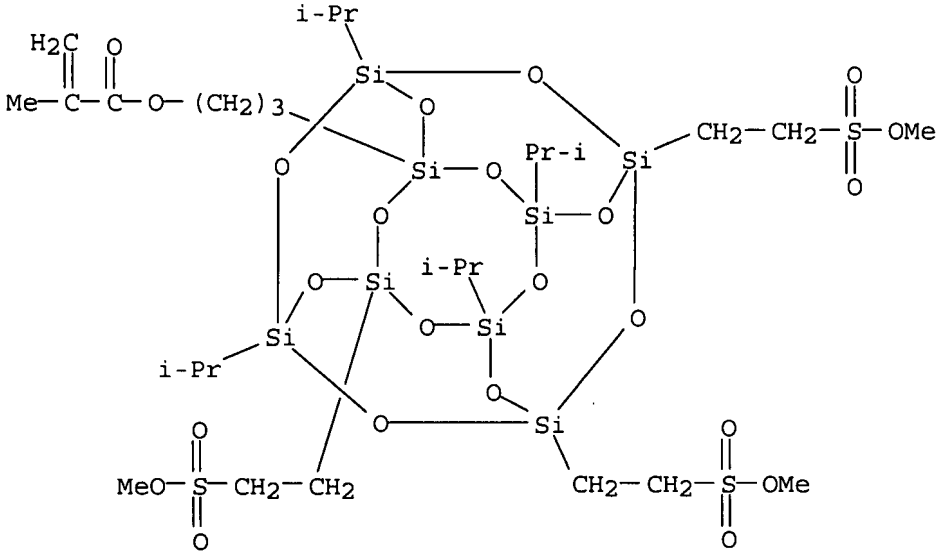
CM 1

CRN 760970-45-4
CMF C10 H12 O6



CM 2

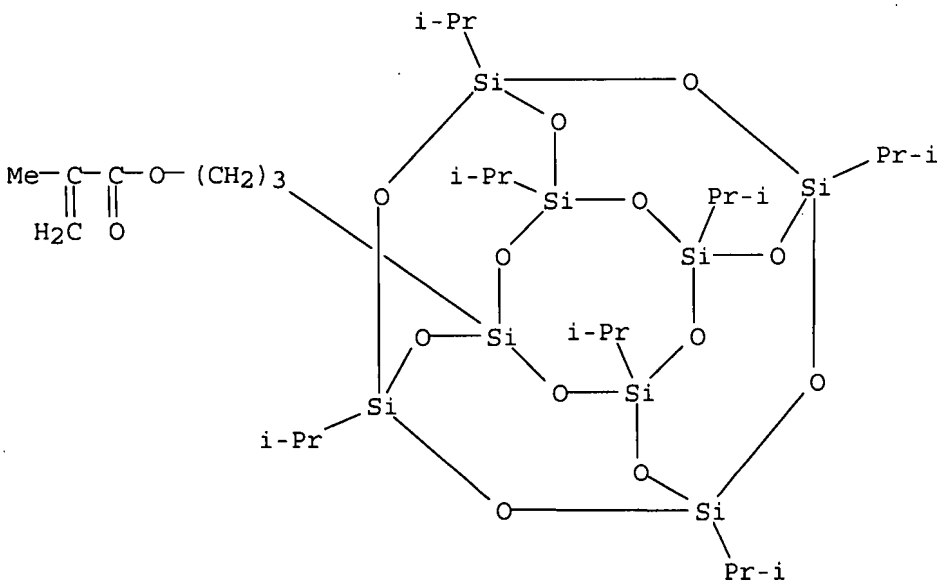
CRN 760970-42-1
CMF C28 H60 O23 S3 Si8



CAS ONLINE PRINTOUT

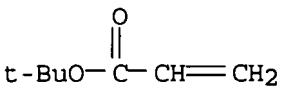
CM 3

CRN 760970-22-7
CMF C28 H60 O14 Si8



CM 4

CRN 1663-39-4
CMF C7 H12 O2



L25 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:753226 CAPLUS
DN 141:285793
TI Positive resist composition
IN Adegawa, Yutaka
PA Fuji Photo Film Co., Ltd., Japan
SO Eur. Pat. Appl., 63 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

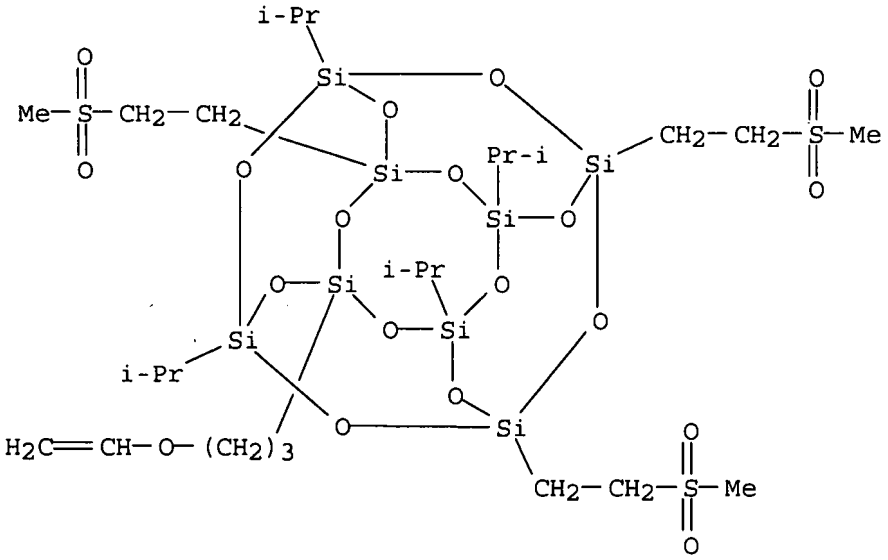
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1457822	A2	20040915	EP 2004-4962	20040303
	EP 1457822	A3	20040922		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
	JP 2004264767	A	20040924	JP 2003-57343	20030304
	US 2004180288	A1	20040916	US 2004-792306	20040304

CAS ONLINE PRINTOUT

US 6969577 B2 20051129
PRAI JP 2003-57343 A 20030304
AB A pos. resist composition comprises (A) a resin having a specific structure as according to the claims and capable of decomposing under action of an acid to increase solubility in an alkali developer, and (B) a compound capable of generating an acid upon irradiation with an actinic ray or radiation. The object of the invention is to provide a pos. resist composition which is adaptable for exposure to far UV radiation using ArF and KrF as light sources in the process of manufacturing semiconductor devices and has various performance improvements, including heightened resolution, excellent mask linearity of CD, scum free, reduced thinning of resist film and reduced SEM shrink.
IT 757241-82-0P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(pos. resist composition)
RN 757241-82-0 CAPLUS
CN 2-Butenedioic acid, bis(1,1-dimethylethyl) ester, polymer with 1-[2-(ethenyloxy)propyl]-3,5,11,13-tetrakis(1-methylethyl)-7,9,15-tris[2-(methylsulfonyl)ethyl]pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxane and ethyl hydrogen 2-butenedioate (9CI) (CA INDEX NAME)

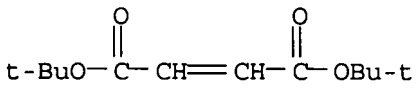
CM 1

CRN 757241-81-9
CMF C26 H58 O19 S3 Si8



CM 2

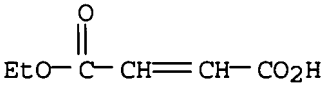
CRN 120515-31-3
CMF C12 H20 O4



CAS ONLINE PRINTOUT

CM 3

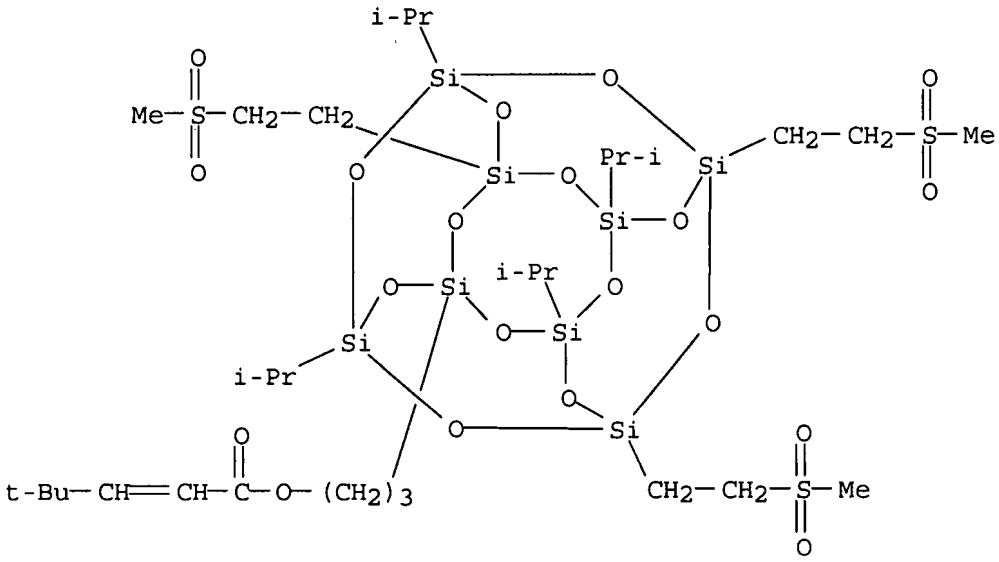
CRN 3249-53-4
CMF C6 H8 O4



IT 757241-80-8
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(pos. resist composition)
RN 757241-80-8 CAPLUS
CN 2-Pentenoic acid, 4,4-dimethyl-, 3-[3,5,11,13-tetrakis(1-methylethyl)-7,9,15-tris[2-(methylsulfonyl)ethyl]pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]propyl ester, polymer with 1,1-dimethylethyl 2-fluoro-2-propenoate (9CI) (CA INDEX NAME)

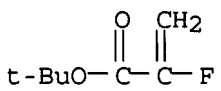
CM 1

CRN 757241-79-5
CMF C31 H66 O20 S3 Si8



CM 2

CRN 85345-86-4
CMF C7 H11 F O2

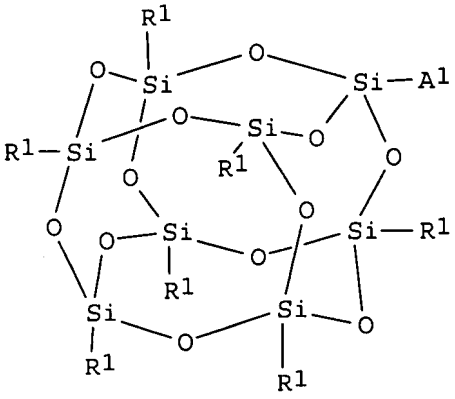


CAS ONLINE PRINTOUT

L25 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AN 2004:143166 CAPLUS
DN 140:181981
TI Silicone compound useful as polymerization initiator for living radical polymerization
IN Ohno, Kohji; Tsujii, Yoshinobu; Fukuda, Takeshi
PA Chisso Corporation, Japan
SO PCT Int. Appl., 94 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004014924	A1	20040219	WO 2003-JP10084	20030807
	W: JP, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR				
	EP 1548020	A1	20050629	EP 2003-784585	20030807
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, SK				
	US 2005288468	A1	20051229	US 2005-523702	20050309
PRAI	JP 2002-229790	A	20020807		
	JP 2002-378150	A	20021226		
	WO 2003-JP10084	W	20030807		

OS MARPAT 140:181981
GI



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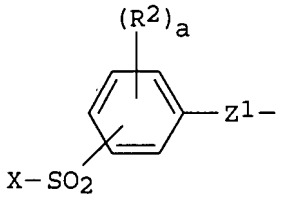

II

AB The present invention relates to silsesquioxane derivs. I, which are good living radical polymerization initiators, wherein R1 = independently H, alkyl, (un)substituted aryl, or (un)substituted arylalkyl; A1 = halogenated sulfonyl group-substituted organic group, preferably II; X = halogen; R2 = alkyl; a = 0-2 integer; and Z1 = a single bond or C1-10 alkylene. The silsesquioxanes initiate acrylic monomers and an acrylic polymer are formed from one site of the silsesquioxane structure. Since the halogenated sulfonyl group has strong electrophilicity, various silsesquioxane derivs. can be synthesized by reacting the silicon compound with various nucleophilic reagents. The silicone compound can hence be used as an intermediate useful in organic syntheses. Thus, 211.5 g phenyltrichlorosilane was hydrolyzed to give a silsesquioxane with weight average mol. weight 3100, sodium hydroxide was added therein and reacted to give a

sodium phenylsilsesquioxane, 10 g of which was reacted with 10.17 g 2-(4-chlorosulfonyl)ethyltrichlorosilane methylene chloride solution to give a sulfonyl chloride-substituted phenylsilsesquioxane, which was used for the polymerization of Me methacrylate in the presence of L-sparteine and cuprous bromide, giving polymethyl methacrylate with conversion 6.51 mol%, Mn 3000, and polydispersity 1.11.

IT 660392-78-9P 660392-79-0P 660392-80-3P 660392-81-4P 660392-82-5P 660392-83-6P 660426-09-5P
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(polymerization initiator; silicone compound useful as polymerization initiators for living radical polymerization)

RN 660392-78-9 CAPLUS
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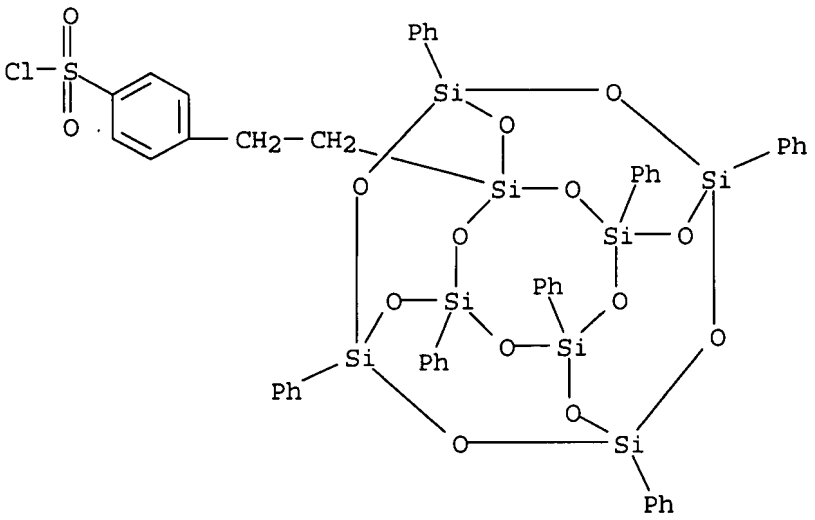

RN 660392-79-0 CAPLUS
CN Benzenesulfonyl chloride, 4-[2-(heptacyclohexylpentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl)ethyl]- (9CI) (CA INDEX NAME)

CAS ONLINE PRINTOUT

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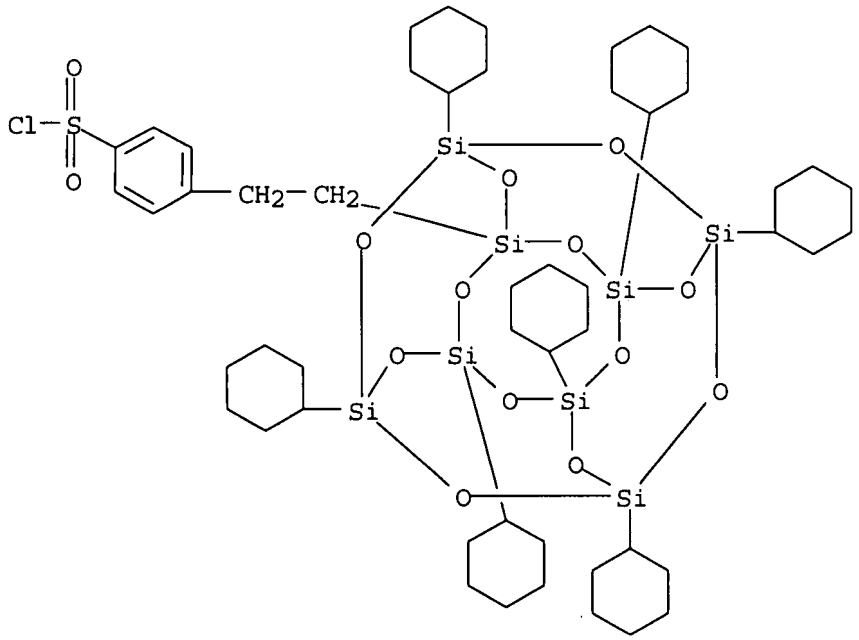

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RN 660392-80-3 CAPLUS
CN Benzenesulfonyl chloride, 4-[2-(heptacyclopentylpentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl)ethyl]- (9CI) (CA INDEX NAME)

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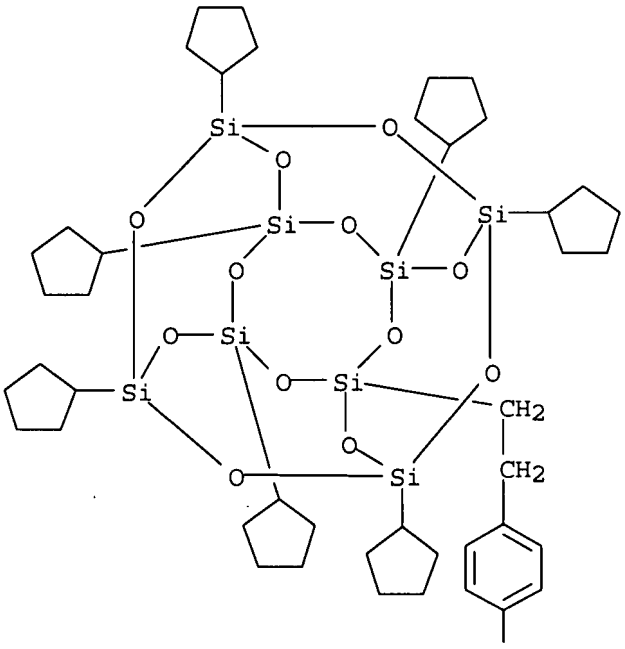
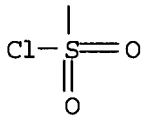
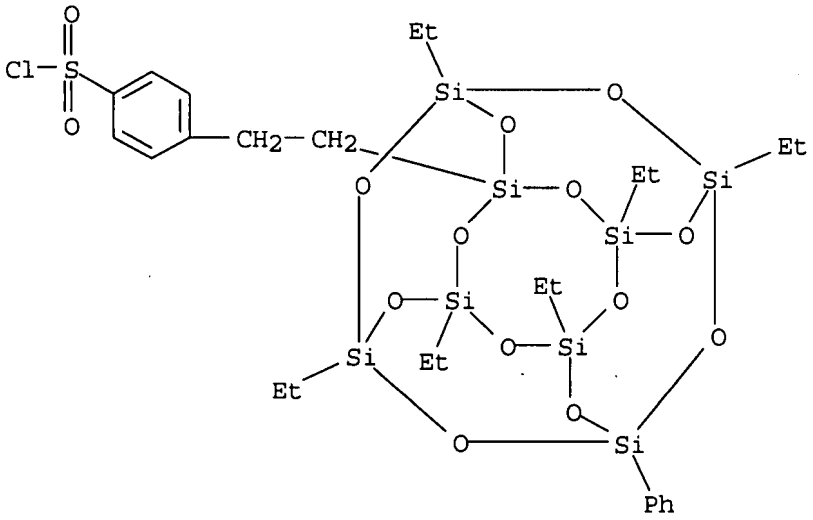




RN 660392-81-4 CAPLUS
CN Benzenesulfonyl chloride, 4-[2-(3,5,9,11,13,15-hexaethyl-7-phenylpentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl)ethyl]- (9CI) (CA INDEX NAME)



RN 660392-82-5 CAPLUS
CN Benzenesulfonyl chloride, 4-[2-[heptakis(2-methylpropyl)pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]ethyl]- (9CI) (CA INDEX NAME)

CAS ONLINE PRINTOUT

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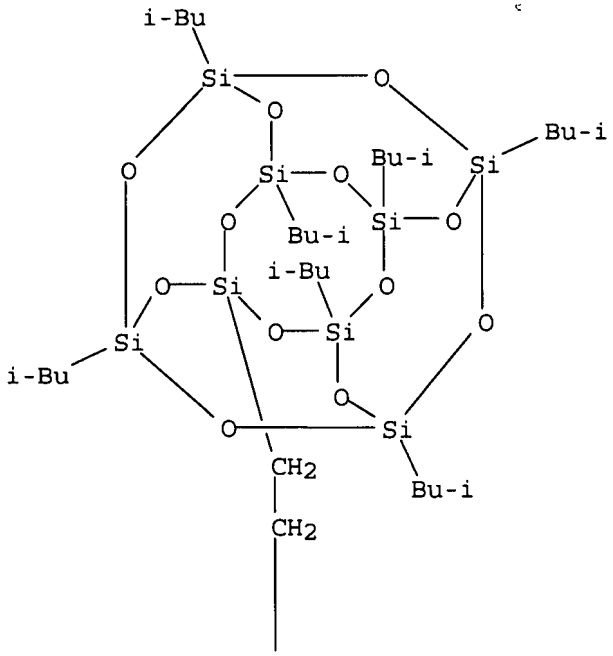

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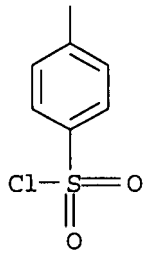

RN 660392-83-6 CAPLUS
CN Benzenesulfonyl chloride, 4-[2-[heptakis(3,3,3-trifluoropropyl)pentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl]ethyl]-(9CI) (CA INDEX NAME)

CAS ONLINE PRINTOUT

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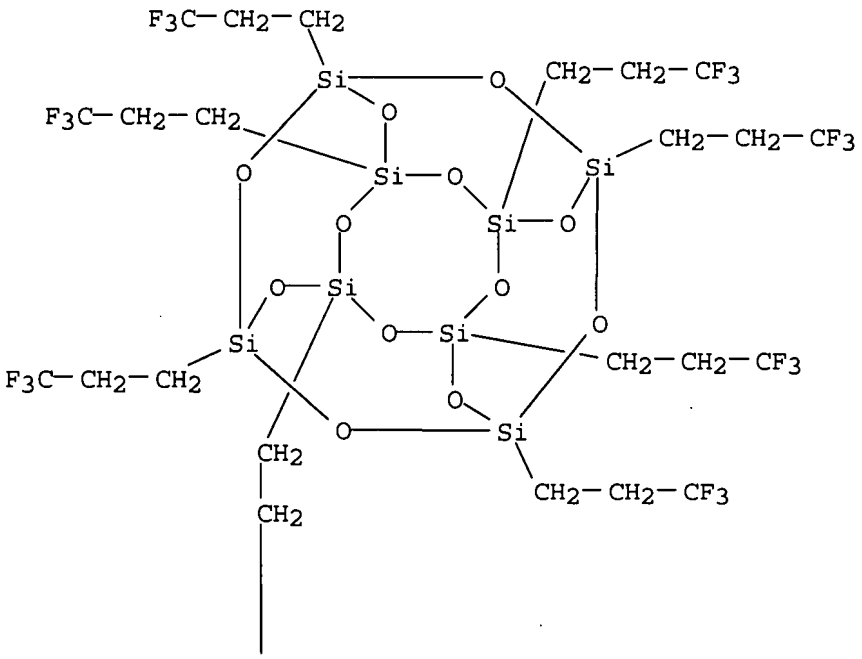

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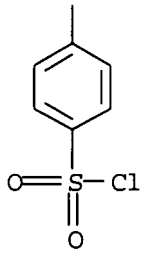

RN 660426-09-5 CAPLUS
CN Benzenesulfonyl chloride, 4-[2-(heptaisooctylpentacyclo[9.5.1.13,9.15,15.17,13]octasiloxanyl)ethyl]- (9CI) (CA INDEX NAME)

CAS ONLINE PRINTOUT

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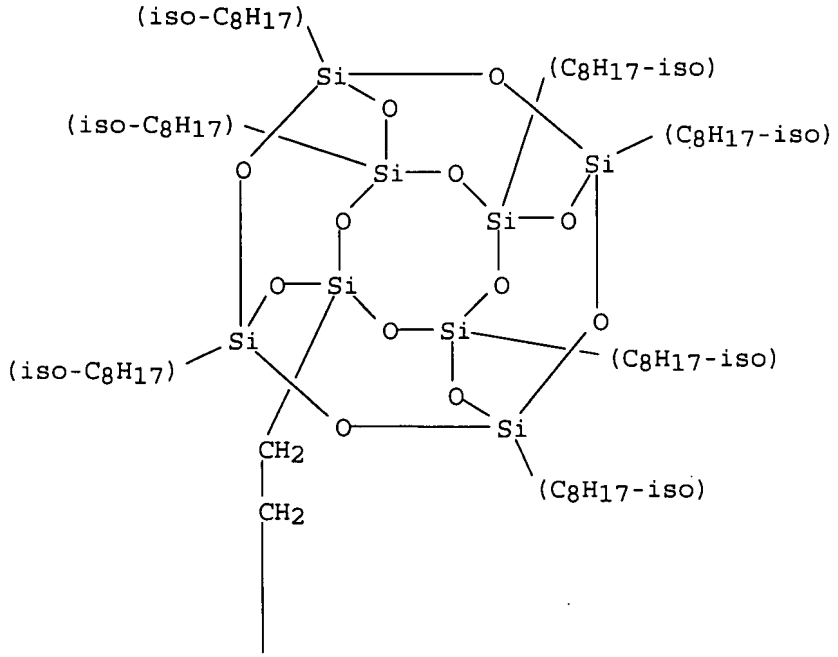

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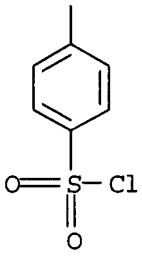

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1294	SILSESQUIOXANE.CLM.	US-PGPUB; USPAT	OR	OFF	2007/05/31 09:35
L2	15	SILSESQUIOXANE DERIVATIVE.CLM.	US-PGPUB; USPAT	ADJ	OFF	2007/05/31 09:35